

October 12, 2020

Ken Lyons
Designated Broker, Realtor®
Boardwalk Real Estate LLC
17533 47th Ave NE
Seattle, WA 98155

Site: 345 Mine Hill Road SW
Issaquah, WA
TPN: 3324069039, 3324069036
Total acreage: 4.9

Re: RFI dated June 2020 and ongoing conversations with Issaquah planning department

This report reflects the changes in grading, buffer averaging, and specific instructions for tree management to obtain the City of Issaquah's required 30% tree retention requirement. The spreadsheet documenting the information from the Tree Risk Assessment has also been updated to adhere to the City of Issaquah code more closely. The following changes have been made to the Tree Risk Assessment spreadsheet:

1. I updated the adjust DBH of the multi-stemmed trees to City of Issaquah requirements (DBH of trunks are added together rather than taking the square root of the sum of the squared DBH of each trunk). Consequently, the adjusted DBH of the following trees changed: (231, 240, 241, 242, 243, 259, 279, 280, 281, 291, 292, 293, 295, 320, 343, 367, 268, 372, 373, 374, 376, 377, 380, 573).
2. I removed the column labelled "nonviable trees". These were trees that without major intervention would be declining to an extent that they were not likely to live into the next decade. The classification of trees in this manner did not address code requirement of distinguishing between living and hazardous trees. On the June 26th, 2020 report I considered 50 trees to be "non-viable" and 42 trees to be hazardous.

In removing the non-viable column, I applied the City of Issaquah's as well as the ISA definition of a "hazard tree". To be considered a "Hazard" that tree, if it were to fail, would endanger live or property. Only thirteen (13) additional trees met the definition and were moved from the "non-viable" column to "hazardous" column. The remaining 37 trees (if they could be pruned or cabled to improve their probability of survival) were considered "viable"
3. Trees located in critical area that were inadvertently shown as being onsite were removed from the spreadsheet (trees #17, 18, 19, 325, 344, 347, 355, 357, 358, 359); and trees 898 & 899 previously shown in critical area are now shown in onsite trees, so the Hazardous tree number increased from 55 to 57 total.
4. Grading was modified to be able to retain six (6) additional trees: (354, 307, 338, 340, 305, 306).
5. I upgraded the health of four (4) trees from "hazardous" to retained after the second Tract "C" was added on adjacent to Lot 4 and the trees no longer had a target. These trees will need to be pruned, and ivy removed under the supervision of an ISA certified arborist after grading.
6. I added the City of Issaquah's definition of a Hazardous tree
7. For each tree that I assessed as being a hazard; in the defects/comment section of the spreadsheet, I added a short description of how the tree met the code criteria for being a hazard. The information is in red type.

This following is a summary of the changes between the June 26th, 2020 arborist report and this one:

| Tree Density Calculation | | |
|--|----------|----------|
| | 06.26.20 | 10.02.20 |
| Total number of trees | 158 | 149 |
| Total number of hazard trees | 42 | 57 |
| Total number of significant trees | 66 | 94 |
| Total number of retained trees proposed | 19 | 30 |
| Total number of tree credits | 2498 | 1983 |
| Total viable tree credits | 1522 | 1983 |
| Tree density (1522 * .15) | 375 | |
| Required tree density (1983*.30) | | 594 |
| Total number of retained tree credits proposed | 377 | 596 |
| Required mitigation | 0 | 0 |

I have included a detailed report of my findings, changes from the original submittal have been highlighted in **yellow**. If you have any questions please contact me. I can be reached on my cell phone: 425.890.3808 or by email: sprince202@aol.com.

Warm regards,



Susan Prince
Creative Landscape Solutions
ISA Certified Arborist #1481
TRAQ Certified Arborist #481
Landscape Designer
425.890.3808

June 26, 2020

Ken Lyons

Designated Broker, Realtor®

Boardwalk Real Estate LLC

17533 47th Ave NE

Seattle, WA 98155

Site: 345 Mine Hill Road SW
Issaquah, WA
TPN: 3324069039, 3324069036
Total acreage: 4.9

Dear Ken:

Thank you for requesting my services. On June 27, 2016, I performed a Visual Risk Assessment (VRA) for all the significant* trees growing on the site above, as well as the offsite and ROW trees with canopies that included coverage on the property.

The information gathered and included in this report is a necessary part of the of the redevelopment process which requires that a Tree Retention Plan to be submitted as part of a proposed site development (IMC 18.12.1385).

In summary:

| Tree Density Calculation | |
|--|----------|
| | 10.02.20 |
| Total number of trees counted outside critical areas | 149 |
| Total number of hazard trees | 55 |
| Total number of significant trees | 94 |
| Total number of retained trees proposed | 30 |
| Total number of tree credits | 1978 |
| Required tree density (1983*.30) | 594 |
| Total number of retained tree credits proposed | 596 |
| Required mitigation | 0 |

I have included a detailed report of my findings, if you have any questions please contact me. I can be reached on my cell phone: 425.890.3808 or by email: sprince202@aol.com.

Warm regards,



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*The City of Issaquah defines a significant tree as an existing healthy tree which, when measured four- and one-half feet above grade, has a minimum diameter of:

- 6" for evergreen trees and most deciduous or
- 8" for alder or cottonwood trees
- Landmark tree DBH > 30" (18.12.030)

Personal qualifications, scope of work and methodology:

To evaluate the trees and prepare the report, I drew on my formal college education in botany and the preparation and training used to obtain my ISA certification. In addition to my education and certification, I relied heavily on my training to obtain my certification as a Tree Risk Assessor. I have been worked in arboriculture since 1995 and been an ISA Certified Arborist since 1999. I have been TRACE/TRAQ qualified since 2009.

I followed protocol delineated by the International Society of Arboriculture (ISA) for Visual Risk Assessment (VRA). By doing so, I am examining each tree independently as well as collectively as groups or stands of trees provide stability and can lower risk of independent tree failure. This scientific process examines tree health (e.g. size, vigor, and insect and disease process) as well as site conditions (soil moisture and composition, quantity of impervious surfaces surrounding the tree etc.)

Method's used to determine tree location and tree health:

Trees were identified previously by numbered aluminum tags attached to the western side of the tree. All the trees on site were examined using the Matheny and Clark¹ criteria for determining the potential hazard of trees in an urban environment as well as the Tree Risk Assessment in Urban Areas and The Urban/Rural Interface by Julian Dunster². Tree diameters were measured using a logger's tape, and tree driplines were measured in four directions if necessary, by a Nikon Forestry PRO Laser Rangefinder™.

ABBREVIATED LEGEND- SEE REPORT FOR GREATER DETAIL

1. Numerical ordering
2. Tree tag #: numbered aluminum tags attached to the trees in the field
3. Tree species ID: common and botanical names
 - Apple: *Malus sp.*
 - American sycamore: *Plantanus occidentalis*
 - Austrian pine: *Pinus nigra*
 - Bigleaf maple: *Acer macrophyllum*
 - Birch: *Betula nigra*
 - Bitter Cherry: *Prunus emarginata*
 - Blue atlas cedar: *Cedrus atlantica* 'Glauc'
 - Cedar: *Thuja plicata*
 - Cherry: *Prunus sp.*
 - Dawn redwood: *Chamaecyparis nootkatensis*
 - Deodora cedar: *Cedrus deodara*
 - Colorado blue spruce: *Picea pungens*
 - Cottonwood: *Populus trichocarpa*
 - Dogwood: *Cornus nuttallii*
 - Douglas fir: *Pseudotsuga menziesii*
 - English laurel: *Prunus laurocerasus*
 - Filbert: *Corylus avellana var.*
 - Grand fir: *Abies grandis*
 - Hemlock: *Tsuga heterophylla*
 - Holly: *Ilex aquifolium*
 - Japanese maple: *Acer palmatum*
 - Leylandii cypress: *Cupressocyparis leylandii*
 - Lodgepole pine: *Pinus contorta*
 - Mountain ash: *Sorbus americana*
 - Mountain hemlock: *Tsuga mertensiana*
 - Pear: *Pyrus sp.*
 - Plum: *Prunus*
 - Red Alder: *Alnus rubra*
 - Red maple: *Acer rubrum*
 - Walnut: *Juglans sp.*
 - Western red cedar: *Thuja plicata*
 - Weeping Alaska cedar: *Metasequoia glyptostroboides*
 - White pine: *Pinus strobus*
4. DBH: diameter of the tree measured in inches at 4' above grade
5. Adj. DBH: multiple trunk tree DBH in inches calculated per municipality directives
6. Dripline Radius: measurement in feet of the tree canopy from tree trunk to outermost branch tip via laser rangefinder
7. Windfirm: whether the tree is not protected by other structures of trees remains windfirm
8. Health: a measurement of overall tree vigor and vitality rated as excellent, good, OK, fair or poor based on an assessment of crown density, leaf color and size, active callusing, shoot growth rate, extent of crown dieback, cambium layer health, and tree age
 - Excellent: Tree is an ideal specimen for the species with no obvious flaws
 - Good: Tree has minimal structural or situational defects

- OK: Minimal structural issues with poor
 - Fair: Tree has structural or health issues that predispose it to failure if further stressed but can be retained in a grove of 3 or more trees
 - Poor: Tree has significant structural and/or health issues. It is exempt from total tree count.
9. Defects/Concerns: a measure of the tree's structural stability and failure potential based on assessment of specific structural features, e.g., decay, conks, co-dominant trunks, included bark, abnormal lean, one-sided canopy, history of failure, prior construction impact, pruning history, etc.
10. Proposed actions:
- Retain
 - Remove due to planned development (tree is otherwise healthy)
 - Hazardous: A hazardous tree is one that is so affected by a significant structural defect or disease or in permanent decline that falling or failure appears imminent, and that otherwise currently poses a threat to life or property and the risk of failure per the most recent adopted ISA standard tree risk assessment evaluation must be rated greater than or equal to "high" as measured on the tree risk assessment form. (IMC 18.12.030)
11. Limits of disturbance/Tree protection zone: the area surrounding the tree that defines the area that surrounds the trunk that cannot be encroached upon during construction. This may be a multiple of the trunk diameter (1 -1.5 times the trunk diameter converted to feet) or it may be related to the width of the canopy. It is always determined by tree species and environment and is up to the discretion of the ISA Certified Arborist to determine
12. Measure of tree "value" may be determined by municipality formula or a direct measure of the trunk diameter, or a numerical count to determine significance; also included on the status of the tree determined by the City to designate exceptional sized or species trees (not always present)

Specific Tree Observations:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | 8 | 9 | 10 | | | 11 | | | | 12 | | | |
|---|------------|-------------------|----------|---------------|-----------------------|-----------|-------------|--------|--|-----------------|------------------------|-----------|----------------|----|----|----|-----------|------------------|--------------------|----------------------|
| # | Tree Tag # | Species ID | DBH (in) | Adj. DBH (in) | Drip-line radius (ft) | Wind-firm | OK in grove | Health | Defects/Comments | Proposed Action | | | CRZ/TPZ/LOD | | | | DBH Value | Viable DBH Value | Retained DBH Value | Significant/Landmark |
| | | | | | | | | | | | | | Radius in feet | | | | | | | |
| | | | | | | | | | | Viable | | | N | W | E | S | | | | |
| | | | | | | | | | | Retain | Remove for improvement | Hazardous | | | | | | | | |
| 1 | 216 | Norway spruce | 13 | 13 | 8 | | | Poor | Asymmetric canopy to east, dead wood, broken branches, dying *effected by structural defect | | | 1 | 8 | 8 | 8 | 8 | 0 | | | NS |
| 2 | 217 | Western red cedar | 35 | 35 | 11 | | | OK | Column of decay on north@ root crown up to 4', typical of species | | 1 | | 11 | 11 | 11 | 11 | 35 | 35 | | L |
| 3 | 218 | Lodgepole Pine | 15 | 15 | 9 | | | OK | Dead wood, broken branches, asymmetric canopy to east | | 1 | | 9 | 9 | 9 | 9 | 15 | 15 | | S |
| 4 | 219 | Catalpa | 33 | 33 | 24 | | | OK | Co-dominant leaders with included bark x2 @ 5', typical of species | | 1 | | 24 | 24 | 24 | 24 | 33 | 33 | | L |
| 5 | 220 | Douglas fir | 18 | 18 | 14 | | | Fair | Ivy @ root crown up to 20', dead wood, broken branches, not much live tissue | | 1 | | 14 | 14 | 14 | 14 | 18 | 18 | | S |
| 6 | 221 | Douglas fir | 16 | 16 | 12 | | | Fair | Asymmetric canopy to north, dead wood, broken branches, not much live tissue, OK in grove | | 1 | | 12 | 12 | 12 | 12 | 16 | 16 | | S |
| 7 | 222 | Douglas fir | 16 | 16 | 14 | | | Fair | Ivy @ root crown up to 20', dead wood, broken branches, thin canopy *effected by structural defect | | | 1 | 14 | 14 | 14 | 14 | 0 | | | NS |
| 8 | 223 | Douglas fir | 13 | 13 | 16 | | | Fair | Ivy @ root crown up to 15', taps hollow, asymmetric canopy to NE, previous top loss, dead wood, broken branches, thin canopy *effected by structural defect | | | 1 | 16 | 16 | 16 | 16 | 0 | | | NS |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | | | | 12 | | | | | | |
|----|------------|-------------------|------------|---------------|-----------------------|-----------|-------------|--------|--|-----------------|------------------------|-----------|----------------|----|----|----|-----------|------------------|--------------------|----------------------|
| # | Tree Tag # | Species ID | DBH (in) | Adj. DBH (in) | Drip-line radius (ft) | Wind-firm | OK in grove | Health | Defects/Comments | Proposed Action | | | CRZ/TPZ/LOD | | | | DBH Value | Viable DBH Value | Retained DBH Value | Significant/Landmark |
| | | | | | | | | | | Viable | | | Radius in feet | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | Retain | Remove for improvement | Hazardous | N | W | E | S | | | | |
| 9 | 224 | Incense cedar*1,2 | 15 | 15 | 13 | | | Poor | Dead wood, broken branches, dead tissue, ivy @ root crown up to 20', typical of species grown in shade, asymmetric canopy to west, thin canopy *symptomatic of a dying cedar - diseases | | | 1 | 13 | 13 | 13 | 13 | 0 | | | NS |
| 10 | 229 | Douglas fir | 45 | 45 | 16 | | | OK | Carpenter ants bark only, previous top loss, typical of species | | 1 | | 16 | 16 | 16 | 16 | 45 | 45 | | L |
| 11 | 230 | Douglas fir | 39 | 39 | 16 | | | OK | Typical of species, previous top loss, dead wood, broken branches | | 1 | | 16 | 16 | 16 | 16 | 39 | 39 | | L |
| 12 | 231 | Bigleaf maple | 14, 16, 40 | 70 | 26 | | | Poor | Co-dominant leaders with included bark x3 @ root crown, multi failures, cavity on NE *Multiple large scaffolds have already failed*effected by structural defect | | | 1 | 26 | 26 | 26 | 26 | 0 | | | NS |
| 13 | 234 | Cedar variety | 7.5 | 7.5 | 7 | | Yes | Fair | Lean to SW, typical of species | | 1 | | 7 | 7 | 7 | 7 | 7.5 | 7.5 | | S |
| 14 | 235 | Bigleaf maple | 9 | 9 | 14 | | | Fair | Moss and lichen, serpentine trunk, lean to north | | 1 | | 14 | 14 | 14 | 14 | 9 | 9 | | S |
| 15 | 236 | Bigleaf maple | 20 | 20 | 19 | | | OK | Dead wood, dead scaffold, moss and lichen | | 1 | | 19 | 19 | 19 | 19 | 20 | 20 | | S |
| 16 | 237 | Western red cedar | 10.5 | 10.5 | 10 | | | Good | Typical of species, self-corrected lean to south | | 1 | | 10 | 10 | 10 | 10 | 10.5 | 10.5 | | S |
| 17 | 238 | Bitter cherry | 7.5 | 7.5 | 10 | | | OK | Asymmetric canopy to east, typical of species, moss and lichen | | 1 | | 10 | 10 | 10 | 10 | 7.5 | 7.5 | | S |
| 18 | 239 | Alder | 14 | 14 | 10 | | | Poor | Mostly dead, cavity on west @ root crown, lean to east, low live crown ratio - 10%, woodpecker activity *Mostly dead - effected by structural defect | | | 1 | 10 | 10 | 10 | 10 | 0 | | | NS |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | 8 | 9 | 10 | | | 11 | | | | 12 | | | |
|----|------------|-------------------|------------|---------------|-----------------------|-----------|-------------|--------|--|-----------------|------------------------|-----------|----------------|----|----|----|-----------|------------------|--------------------|----------------------|
| # | Tree Tag # | Species ID | DBH (in) | Adj. DBH (in) | Drip-line radius (ft) | Wind-firm | OK in grove | Health | Defects/Comments | Proposed Action | | | CRZ/TPZ/LOD | | | | DBH Value | Viable DBH Value | Retained DBH Value | Significant/Landmark |
| | | | | | | | | | | | | | Radius in feet | | | | | | | |
| | | | | | | | | | | Viable | | | N | W | E | S | | | | |
| | | | | | | | | | | Retain | Remove for improvement | Hazardous | | | | | | | | |
| 19 | 240 | Bigleaf maple | 38, 30 | 68 | 30 | | | Poor | Exposed roots, hypoxylon canker, carpenter ants, cavity @ root crown up to 14', failing, co-dominant leaders with included bark x2 *Hypoxylon canker is a fatal disease, disease | | | 1 | 30 | 30 | 30 | 30 | 0 | | | NS |
| 20 | 241 | Western red cedar | 13, 4, 5 | 22 | 7 | | | OK | Co-dominant leaders with included bark x3 @ root crown, typical of species | | 1 | | 7 | 7 | 7 | 7 | 22 | 22 | | S |
| 21 | 242 | Bigleaf maple | 18, 17, 16 | 51 | 21 | | | OK | Co-dominant leaders with included bark x3 @ root crown, moss and lichen, typical of species | | 1 | | 21 | 21 | 21 | 21 | 51 | 51 | | S |
| 22 | 243 | Western red cedar | 17, 36 | 53 | 13 | | | OK | Co-dominant leaders with included bark x2 @ 3', column of decay on east @ root crown up to 9', typical of species | | 1 | | 13 | 13 | 13 | 13 | 53 | 53 | | L |
| 23 | 244 | Western red cedar | 13 | 13 | 10 | Not | | Poor | Asymmetric canopy to west, typical of species, OK in grove, * tree is not windfirm | | | 1 | 10 | 10 | 10 | 10 | 0 | | | NS |
| 24 | 245 | Bigleaf maple | 21 | 21 | 19 | | | Fair | Cavity @ root crown up to 5' on west, lean to east, dead spur * Large cavity of decay, structural defect | | | 1 | 19 | 19 | 19 | 19 | 0 | | | NS |
| 25 | 246 | Western red cedar | 13 | 13 | 6 | | | Good | Exposed roots, typical of species | | 1 | | 6 | 6 | 6 | 6 | 13 | 13 | | S |
| 26 | 247 | Bigleaf maple | 25 | 25 | 20 | | | OK | Moss and lichen, dead wood, typical of species | | 1 | | 20 | 20 | 20 | 20 | 25 | 25 | | S |
| 27 | 248 | Bitter cherry | 6 | 6 | 15 | | | Poor | Typical of species, moss and lichen, failing to south, taps hollow *short lived tree that is hollow from decay in heartwood, structural defect | | | 1 | 15 | 15 | 15 | 15 | 0 | | | NS |
| 28 | 249 | Bitter cherry | 8 | 8 | 9 | | | OK | Broken branches, moss and lichen, typical of species, dead scaffold | | 1 | | 9 | 9 | 9 | 9 | 8 | 8 | | S |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | 8 | 9 | 10 | | | 11 | | | | 12 | | | |
|----|------------|-------------------|----------|---------------|-----------------------|-----------|-------------|--------|---|-----------------|------------------------|-----------|----------------|----|----|----|-----------|------------------|--------------------|----------------------|
| # | Tree Tag # | Species ID | DBH (in) | Adj. DBH (in) | Drip-line radius (ft) | Wind-firm | OK in grove | Health | Defects/Comments | Proposed Action | | | CRZ/TPZ/LOD | | | | DBH Value | Viable DBH Value | Retained DBH Value | Significant/Landmark |
| | | | | | | | | | | | | | Radius in feet | | | | | | | |
| | | | | | | | | | | Viable | | | N | W | E | S | | | | |
| | | | | | | | | | | Retain | Remove for improvement | Hazardous | | | | | | | | |
| 29 | 250 | Bigleaf maple | 41 | 41 | 20 | | | OK | Twisted trunks, typical of species, multi failures, decay @ root crown | | 1 | | 20 | 20 | 20 | 20 | 41 | 41 | | L |
| 30 | 251 | Western red cedar | 66 | 66 | 16 | | | OK | Carpenter ants, woodpecker activity, exposed roots, typical of species, broken branches, old tree fort, remove old fort | | 1 | | 16 | 16 | 16 | 16 | 66 | 66 | | L |
| 31 | 252 | Western red cedar | 70 | 70 | 17 | | | OK | Co-dominant leaders with included bark x3 @ 5', typical of species | | 1 | | 17 | 17 | 17 | 17 | 70 | 70 | | L |
| 32 | 253 | Western red cedar | 6 | 6 | 10 | | | OK | Typical of species | | 1 | | 10 | 10 | 10 | 10 | 6 | 6 | | S |
| 33 | 254 | Western red cedar | 6 | 6 | 10 | | | Fair | Girdled by rope @ 4', vandalized, typical of species, all can be saved with #252 | | 1 | | 10 | 10 | 10 | 10 | 6 | 6 | | S |
| 34 | 255 | Western red cedar | 6 | 6 | 10 | | | Poor | Typical of species, vandalized, bark stripped *Tree was vandalized, and bark was removed from circumference, tree will not survive structural defect | | | 1 | 10 | 10 | 10 | 10 | 0 | | | NS |
| 35 | 256 | Alder | 12 | 12 | 12 | | | Poor | Failing to east *Actively falling - hazard | | | 1 | 12 | 12 | 12 | 12 | 0 | | | NS |
| 36 | 257 | Bigleaf maple | 9 | 9 | 11 | | | OK | Asymmetric canopy to east, moss and lichen, typical of species | | 1 | | 11 | 11 | 11 | 11 | 9 | 9 | | S |
| 37 | 258 | Bigleaf maple | 9.5 | 9.5 | 12 | | | OK | Typical of species, asymetric canopy to south, exposed roots | | 1 | | 12 | 12 | 12 | 12 | 9.5 | 9.5 | | S |
| 38 | 259 | Bigleaf maple | 9, 9 | 12.5 | 17 | | | Fair | Taps hollow, co-dominant leaders with included bark x2 @ 4', decay @ 4' | | 1 | | 17 | 17 | 17 | 17 | 12.5 | 12.5 | | S |
| 39 | 260 | Bigleaf maple | 13 | 13 | 14 | | | OK | Moss and lichen, typical of species, dead wood, broken branches | | 1 | | 14 | 14 | 14 | 14 | 13 | 13 | | S |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | 8 | 9 | 10 | | | 11 | | | | 12 | | | |
|----|------------|---------------|----------|---------------|-----------------------|-----------|-------------|--------|--|-----------------|------------------------|-----------|----------------|----|----|----|-----------|------------------|--------------------|----------------------|
| # | Tree Tag # | Species ID | DBH (in) | Adj. DBH (in) | Drip-line radius (ft) | Wind-firm | OK in grove | Health | Defects/Comments | Proposed Action | | | CRZ/TPZ/LOD | | | | DBH Value | Viable DBH Value | Retained DBH Value | Significant/Landmark |
| | | | | | | | | | | | | | Radius in feet | | | | | | | |
| | | | | | | | | | | Viable | | | N | W | E | S | | | | |
| | | | | | | | | | | Retain | Remove for improvement | Hazardous | | | | | | | | |
| 40 | 261 | Bigleaf maple | 8 | 8 | 9 | | | Poor | Ivy @ root crown up to 25', mostly dead * Small diameter BLM girdled and choked by ivy, not survivable, | | | 1 | 9 | 9 | 9 | 9 | 0 | | | NS |
| 41 | 262 | Bigleaf maple | 14 | 14 | 17 | | | OK | Typical of species, moss and lichen, asymmetric canopy to north | | 1 | | 17 | 17 | 17 | 17 | 14 | 14 | | S |
| 42 | 263 | Alder | 10 | 10 | 12 | | | Poor | Moss and lichen, failing to north * tree falling hazard | | | 1 | 12 | 12 | 12 | 12 | 0 | | | NS |
| 43 | 264 | Bigleaf maple | 11 | 11 | 16 | | | OK | Typical of species, asymmetric canopy to north | | 1 | | 16 | 16 | 16 | 16 | 11 | 11 | | S |
| 44 | 265 | Bigleaf maple | 14 | 14 | 16 | | | Fair | Serpentine trunk, dead wood, dead scaffold, typical of species*upright tree with multiple failures leading to a serpentine trunk structure, at high risk of failure -structural defect | | | 1 | 16 | 16 | 16 | 16 | 0 | | | NS |
| 45 | 266 | Bigleaf maple | 9 | 9 | 10 | | | Fair | Self-corrected lean to north, moss and lichen, previous top loss, dead wood, OK in grove | | 1 | | 10 | 10 | 10 | 10 | 9 | 9 | | S |
| 46 | 267 | Bitter cherry | 11 | 11 | 8 | | | OK | Typical of species, dead wood, broken branches, previous top loss | | 1 | | 8 | 8 | 8 | 8 | 11 | 11 | | S |
| 47 | 268 | Alder | 16 | 16 | 10 | | | Fair | Ivy @ root crown up to 25', column of decay on east @ root crown up to 8', dead wood, dead scaffold, moss and lichen | | 1 | | 10 | 10 | 10 | 10 | 16 | 16 | | S |
| 48 | 269 | Bitter cherry | 11 | 11 | 7 | | | OK | Typical of species, hanger, dead wood, broken branches, exposed roots | | 1 | | 7 | 7 | 7 | 7 | 11 | 11 | | S |
| 49 | 270 | Bigleaf maple | 10 | 10 | 10 | | | Fair | Ivy @ root crown up to 30', low live crown ratio - 10% | | 1 | | 10 | 10 | 10 | 10 | 10 | 10 | | S |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | 8 | 9 | 10 | | | 11 | | | | 12 | | | |
|----|------------|---------------|-----------|---------------|-----------------------|-----------|-------------|--------|---|-----------------|------------------------|-----------|----------------|----|----|----|-----------|------------------|--------------------|----------------------|
| # | Tree Tag # | Species ID | DBH (in) | Adj. DBH (in) | Drip-line radius (ft) | Wind-firm | OK in grove | Health | Defects/Comments | Proposed Action | | | CRZ/TPZ/LOD | | | | DBH Value | Viable DBH Value | Retained DBH Value | Significant/Landmark |
| | | | | | | | | | | | | | Radius in feet | | | | | | | |
| | | | | | | | | | | Viable | | | N | W | E | S | | | | |
| | | | | | | | | | | Retain | Remove for improvement | Hazardous | | | | | | | | |
| 50 | 271 | Bigleaf maple | 9 | 9 | 11 | | | OK | Low live crown ratio - 10%, typical of species, OK in grove | | 1 | | 11 | 11 | 11 | 11 | 9 | 9 | | S |
| 51 | 272 | Bigleaf maple | 15 | 15 | 14 | | | Fair | Typical of species, slime flux * weeping sap, secondary slime flux - disease | | | 1 | 14 | 14 | 14 | 14 | 0 | | | NS |
| 52 | 273 | Bigleaf maple | 11 | 11 | 19 east only | No | | OK | Asymmetric canopy to east, typical of species | | 1 | | 0 | 0 | 19 | 0 | 11 | 11 | | S |
| 53 | 274 | Ash | 10 | 10 | 0 | | | Poor | Failing to east * falling from soil failure equals eminent high risk | | | 1 | 0 | 0 | 0 | 0 | 0 | | | NS |
| 54 | 275 | Bitter cherry | 16 | 16 | 16 | | | Fair | Co-dominant leaders with included bark x2 @ 6', large wound calloused @ 4' on south, gall @ 6' on north, gummosis, typical of species * internal decay in short-lived tree = imminent risk of failure-structural defect | | | 1 | 16 | 16 | 16 | 16 | 0 | | | NS |
| 55 | 276 | Bitter cherry | 6 | 6 | 7 | | | Fair | Serpentine trunk, self-corrected lean to south, co-dominant leaders with included bark x2 @ 8' | | 1 | | 7 | 7 | 7 | 7 | 6 | 6 | | S |
| 56 | 277 | Bitter cherry | 6 | 6 | 6 | | | OK | Serpentine trunk, slight lean to south | | 1 | | 6 | 6 | 6 | 6 | 6 | 6 | | S |
| 57 | 278 | Alder | 8 | 8 | 10 | | | Fair | Typical of species, dead scaffold, dead wood, moss and lichen | | 1 | | 10 | 10 | 10 | 10 | 8 | 8 | | S |
| 58 | 279 | Bitter cherry | 7, 7 | 14 | 9 | | | OK | Co-dominant leaders with included bark x2 @ root crown, typical of species, slight lean to north | | 1 | | 9 | 9 | 9 | 9 | 14 | 14 | | S |
| 59 | 280 | Alder | 7, 10, 12 | 29 | 10 | | | Fair | Co-dominant leaders with included bark x3 @ root crown, typical of species | | 1 | | 10 | 10 | 10 | 10 | 29 | 29 | | S |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | 8 | 9 | 10 | | | 11 | | | | 12 | | | |
|----|------------|---------------|----------|---------------|-----------------------|-----------|-------------|--------|--|-----------------|------------------------|-----------|----------------|----|----|----|-----------|------------------|--------------------|----------------------|
| # | Tree Tag # | Species ID | DBH (in) | Adj. DBH (in) | Drip-line radius (ft) | Wind-firm | OK in grove | Health | Defects/Comments | Proposed Action | | | CRZ/TPZ/LOD | | | | DBH Value | Viable DBH Value | Retained DBH Value | Significant/Landmark |
| | | | | | | | | | | | | | Radius in feet | | | | | | | |
| | | | | | | | | | | Viable | | | N | W | E | S | | | | |
| | | | | | | | | | | Retain | Remove for improvement | Hazardous | | | | | | | | |
| 60 | 281 | Alder | 8, 7 | 15 | 10 | | | Poor | Co-dominant leaders with included bark x2 @ root crown, exposed roots, cavity @ 1' on west, vertical crack @ 5' and 7' on east trunk * large vertical crack makes this susceptible to eminent failure; structural defect | | | 1 | 10 | 10 | 10 | 10 | 0 | | | NS |
| 61 | 282 | Alder | 12 | 12 | 12 | | | Fair | Exposed roots, column of decay @ root crown up to 8' on south, typical of species | | 1 | | 12 | 12 | 12 | 12 | 12 | 12 | | S |
| 62 | 283 | Alder | 8 | 8 | 7 | | | Poor | Large wound @ root crown up to 2' on south with decay * large cavity of decay in small DBH tree puts it at high risk of failure disease, structural defect | | | 1 | 7 | 7 | 7 | 7 | 0 | | | NS |
| 63 | 284 | Alder | 12 | 12 | 12 | | | Fair | Wound with decay @ 3' on west, dead wood, dead scaffold * short-lived tree with open wound and decay makes this tree at high risk of failure structural defect | | | 1 | 12 | 12 | 12 | 12 | 0 | | | NS |
| 64 | 288 | Bigleaf maple | 10 | 10 | 12 | | | OK | Co-dominant leaders with included bark x2 @ 3', dead scaffold, dead wood, typical of species, OK with pruning | | 1 | | 12 | 12 | 12 | 12 | 10 | 10 | | S |
| 65 | 289 | Bigleaf maple | 17 | 17 | 20 | | | OK | Asymmetric canopy to east, typical of species, moss and lichen, broken branches, dead wood | | 1 | | 20 | 20 | 20 | 20 | 17 | 17 | | S |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | 8 | 9 | 10 | | | 11 | | | | 12 | | | |
|----|------------|---------------|------------|---------------|-----------------------|-----------|-------------|--------|--|-----------------|------------------------|-----------|----------------|----|----|----|-----------|------------------|--------------------|----------------------|
| # | Tree Tag # | Species ID | DBH (in) | Adj. DBH (in) | Drip-line radius (ft) | Wind-firm | OK in grove | Health | Defects/Comments | Proposed Action | | | CRZ/TPZ/LOD | | | | DBH Value | Viable DBH Value | Retained DBH Value | Significant/Landmark |
| | | | | | | | | | | | | | Radius in feet | | | | | | | |
| | | | | | | | | | | Viable | | | N | W | E | S | | | | |
| | | | | | | | | | | Retain | Remove for Improvement | Hazardous | | | | | | | | |
| 66 | 290 | Bigleaf maple | 73.5 | 73.5 | 30 | | | Fair | Old tree fort, decay @ root crown, typical of species, dead scaffold, broken branches, dead wood, column of decay, cavity @ root crown, previous failures, OK in grove | | 1 | | 30 | 30 | 30 | 30 | 73.5 | 73.5 | | L |
| 67 | 291 | Bigleaf maple | 15, 8, 9 | 32 | 19 | | | Poor | Co-dominant leaders with included bark x3 @ root crown, cavity @ 3', ivy @ root crown up to 40' *large hole in trunk at root crown, completely covered to top of tree with ivy. Not able to stand alone without intact ivy makes this an imminent risk of failure structural defect | | | 1 | 19 | 19 | 19 | 19 | 0 | | | NS |
| 68 | 292 | Bigleaf maple | 24, 24 | 48 | 24 | | | Poor | Co-dominant leaders with included bark x2 @ root crown, vertical crack @ root crown up to 15' *large crack in short-lived tree, puts this tree at high risk of failure in wet snow or wind, structural defect | | | 1 | 24 | 24 | 24 | 24 | 0 | | | NS |
| 69 | 293 | Ash | 14, 6 | 20 | 9 | | | Poor | Mostly dead * permanent decline | | | 1 | 9 | 9 | 9 | 9 | 0 | | | NS |
| 70 | 295 | Bigleaf maple | 12, 20, 18 | 50 | 24 | | | Poor | Co-dominant leaders with included bark x3 @ root crown, ivy @ root crown up to 40', column of decay @ root crown, lean to west, dead wood, broken branches, column of decay on north * tree supported by ivy, approximately 1/2 of the tree is dead, structural defect | | | 1 | 24 | 24 | 24 | 24 | 0 | | | NS |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | 8 | 9 | 10 | | | 11 | | | | 12 | | | |
|----|------------|-------------------|----------|---------------|-----------------------|-----------|-------------|--------|---|-----------------|------------------------|-----------|----------------|----|----|----|-----------|------------------|--------------------|----------------------|
| # | Tree Tag # | Species ID | DBH (in) | Adj. DBH (in) | Drip-line radius (ft) | Wind-firm | OK in grove | Health | Defects/Comments | Proposed Action | | | CRZ/TPZ/LOD | | | | DBH Value | Viable DBH Value | Retained DBH Value | Significant/Landmark |
| | | | | | | | | | | | | | Radius in feet | | | | | | | |
| | | | | | | | | | | Viable | | | N | W | E | S | | | | |
| | | | | | | | | | | Retain | Remove for improvement | Hazardous | | | | | | | | |
| 71 | 297 | Bigleaf maple | 65 | 65 | 28 | | | Poor | Co-dominant leaders with included bark x2 @ 7', column of decay on west, hypoxylon canker * Hypoxylon canker - fatal disease, | | | 1 | 28 | 28 | 28 | 28 | 0 | | | NS |
| 72 | 298 | Western red cedar | 40 | 40 | 14 | | | OK | Typical of species, dead wood | | 1 | | 14 | 14 | 14 | 14 | 40 | 40 | | L |
| 73 | 299 | Douglas fir | 46 | 46 | 15 | No | | Poor | Ivy @ root crown up to 50', abnormal bark, carpenter ants bark only, previous top loss, elongated branches, low live crown ratio - 15%, popping bark * soil failure, imminent risk of failure | | | 1 | 15 | 15 | 15 | 15 | 0 | | | NS |
| 74 | 300 | Western red cedar | 15 | 15 | 11 | | | OK | Exposed roots, typical of species | | 1 | | 11 | 11 | 11 | 11 | 15 | 15 | | S |
| 75 | 301 | Bigleaf maple | 15 | 15 | 12 | | | OK | Moss and lichen, suppressed canopy, typical of species | | 1 | | 12 | 12 | 12 | 12 | 15 | 15 | | S |
| 76 | 302 | Bigleaf maple | 18 | 18 | 14 | | | OK | Suppressed canopy, moss and lichen, asymmetric canopy to west | | 1 | | 14 | 14 | 14 | 14 | 18 | 18 | | S |
| 77 | 303 | Bigleaf maple | 12 | 12 | 15 | | | Poor | Self-corrected lean, large cavity on west @ 6' to 15' * | | | 1 | 15 | 15 | 15 | 15 | 0 | | | NS |
| 78 | 304 | Bigleaf maple | 24 | 24 | 18 | | | OK | Moss and lichen, typical of species, dead wood, suppressed canopy | | 1 | | 18 | 18 | 18 | 18 | 24 | 24 | | S |
| 79 | 305 | Bigleaf maple | 23 | 23 | 16 | | | OK | Cavity @ root crown up to 8' on east, moss and lichen, narrow canopy, suppressed canopy | 1 | | | 16 | 16 | 16 | 16 | 23 | 23 | 23 | S |
| 80 | 306 | Douglas fir | 35 | 35 | 22 | | Yes | Fair | Ivy @ root crown up to 45', abnormal bark, shedding bark, carpenter ants bark only, previous top loss, elongated branch, low live crown ratio - 10%, OK in grove | 1 | | | 22 | 22 | 22 | 22 | 35 | 35 | 35 | L |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | 8 | 9 | 10 | | | 11 | | | | 12 | | | |
|----|------------|---------------|----------|---------------|-----------------------|-----------|-------------|--------|--|-----------------|------------------------|-----------|----------------|----|----|----|-----------|------------------|--------------------|----------------------|
| # | Tree Tag # | Species ID | DBH (in) | Adj. DBH (in) | Drip-line radius (ft) | Wind-firm | OK in grove | Health | Defects/Comments | Proposed Action | | | CRZ/TPZ/LOD | | | | DBH Value | Viable DBH Value | Retained DBH Value | Significant/Landmark |
| | | | | | | | | | | | | | Radius in feet | | | | | | | |
| | | | | | | | | | | Viable | | | N | W | E | S | | | | |
| | | | | | | | | | | Retain | Remove for improvement | Hazardous | | | | | | | | |
| 81 | 307 | Bigleaf maple | 20 | 20 | 16 | | | Fair | Exposed roots, cavity on west @ root crown up to 3', cavity @ root crown up to 11' on west, asymmetric canopy to north | 1 | | | 16 | 16 | 16 | 16 | 20 | 20 | 20 | S |
| 82 | 309 | Bigleaf maple | 24 | 24 | 0 | | | Poor | Mostly dead * structural defect | | | 1 | 0 | 0 | 0 | 0 | 0 | | | NS |
| 83 | 310 | Bigleaf maple | 19 | 15 | 16 | | | OK | Typical of species, dead scaffold, dead wood, co-dominant canopy, cavity on west, vertical crack 8' to 13' on north | | 1 | | 16 | 16 | 16 | 16 | 19 | 19 | | S |
| 84 | 311 | Bigleaf maple | 21 | 18 | 16 | | | OK | Moss and lichen, co-dominant leaders with included bark x3 reduced to 2 @ 8', 6" trunk fused to main trunk @ 8', typical of species, moss and lichen, cavity @ 1' to 3' on north | | 1 | | 16 | 16 | 16 | 16 | 21 | 21 | | S |
| 85 | 312 | Bigleaf maple | 12 | 12 | 15 | | | Fair | Exposed roots, gall @ root crown on west, dead wood, dead scaffold, suppressed canopy | | 1 | | 15 | 15 | 15 | 15 | 12 | 12 | | S |
| 86 | 313 | Bigleaf maple | 24 | 24 | 17 | | | Fair | Exposed roots, moss and lichen, dead wood, dead scaffold, suppressed canopy | | 1 | | 17 | 17 | 17 | 17 | 24 | 24 | | S |
| 87 | 314 | Bigleaf maple | 27 | 27 | 22 | | | Good | Ivy @ root crown up to 25', typical of species | | 1 | | 22 | 22 | 22 | 22 | 27 | 27 | | S |
| 88 | 315 | Bigleaf maple | 24 | 24 | 20 | | | Poor | Ivy @ root crown up to 20', exposed roots, dead wood, dead scaffold, large cavity @ 3' to 15' * 12' long cavity of decay, structural defect | | | 1 | 20 | 20 | 20 | 20 | 0 | | | NS |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | 8 | 9 | 10 | | | 11 | | | | 12 | | | |
|--------|------------------------|---------------|------------|---------------|-----------------------|-----------|-------------|--------|---|-----------------|---|---|----------------|----|----|----|-----------|------------------|--------------------|----------------------|
| # | Tree Tag # | Species ID | DBH (in) | Adj. DBH (in) | Drip-line radius (ft) | Wind-firm | OK in grove | Health | Defects/Comments | Proposed Action | | | CRZ/TPZ/LOD | | | | DBH Value | Viable DBH Value | Retained DBH Value | Significant/Landmark |
| | | | | | | | | | | | | | Radius in feet | | | | | | | |
| | | | | | | | | | | Viable | | | N | W | E | S | | | | |
| Retain | Remove for improvement | Hazardous | | | | | | | | | | | | | | | | | | |
| 89 | 316 | Douglas fir | 64 | 64 | 22 | | | OK | Ivy @ root crown up to 50', abnormal bark, shedding bark, popping bark, carpenter ants bark only, previous top loss, elongated branches, difficult to access due to heavy ivy, probably OK in grove | | 1 | | 22 | 22 | 22 | 22 | 64 | 64 | | L |
| 90 | 317 | Douglas fir | 60 | 60 | 24 | | | OK | Ivy @ root crown up to 50', dead wood, dead twigs, previous top loss, elongated branches, abnormal bark, shedding bark, carpenter ants bark only, difficult to access, probably OK | | 1 | | 24 | 24 | 24 | 24 | 60 | 60 | | L |
| 91 | 318 | Bigleaf maple | 23 | 23 | 21 | | | OK | Moss and lichen, typical of species, ivy @ root crown up to 40', dead wood, dead scaffold, OK in grove | | 1 | | 21 | 21 | 21 | 21 | 23 | 23 | | S |
| 92 | 319 | Bigleaf maple | 18 | 18 | 22 west only | No | Yes | Fair | Moss and lichen, asymmetric canopy to west, dead wood, broken branches, typical of species, OK in grove * Soil failure imminent hazard | | | 1 | 0 | 22 | 0 | 0 | 0 | | | NS |
| 93 | 320 | Bigleaf maple | 20, 18, 14 | 52 | 0 | | | Poor | Co-dominant leaders with included bark x3 @ root crown, mostly dead *almost dead, obvious hazard, structural defect | | | 1 | 0 | 0 | 0 | 0 | 0 | | | NS |
| 94 | 321 | Bigleaf maple | 17 | 17 | 16 | | Yes | Fair | Ivy @ root crown up to 35', suppressed canopy, typical of species | | 1 | | 16 | 16 | 16 | 16 | 17 | 17 | | S |
| 95 | 322 | Bigleaf maple | 32 | 32 | 24 | | | Fair | Ivy @ root crown up to 45', suppressed canopy, typical of species, dead spur, exposed roots, cavity on west * supported by ivy, | | | 1 | 24 | 24 | 24 | 24 | 0 | | | NS |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | 8 | 9 | 10 | | | 11 | | | | 12 | | | |
|-----|------------|---------------|----------|---------------|-----------------------|-----------|-------------|--------|---|-----------------|------------------------|-----------|----------------|----|----|----|-----------|------------------|--------------------|----------------------|
| # | Tree Tag # | Species ID | DBH (in) | Adj. DBH (in) | Drip-line radius (ft) | Wind-firm | OK in grove | Health | Defects/Comments | Proposed Action | | | CRZ/TPZ/LOD | | | | DBH Value | Viable DBH Value | Retained DBH Value | Significant/Landmark |
| | | | | | | | | | | Viable | | | Radius in feet | | | | | | | |
| | | | | | | | | | | Retain | Remove for improvement | Hazardous | N | W | E | S | | | | |
| | | | | | | | | | large hole on side, structural defect | | | | | | | | | | | |
| 96 | 323 | Bigleaf maple | 31 | 31 | 38 | | | Poor | Large failure with decay @ 12' on north * 1/2 of the tree has already fallen off, structural defect | | | 1 | 38 | 38 | 38 | 38 | 0 | | | NS |
| 97 | 324 | Bigleaf maple | 27 | 27 | 18 north only | | | Poor | Cavity @ root crown, cavity @ 3' to 5', previous top loss, previous large trunk loss, dead wood * 2' hole in tree, dying structural defect | | | 1 | 18 | 0 | 0 | 0 | 0 | | | NS |
| 98 | 326 | Bigleaf maple | 19 | 19 | 20 | | | Fair | Ivy @ root crown up to 50', typical of species, ivy to top of tree * tree only supported by ivy - if ivy is removed tree falls, structural defect | | | 1 | 20 | 20 | 20 | 20 | 0 | | | NS |
| 99 | 327 | Bigleaf maple | 17 | 17 | 12 | | | Fair | Ivy @ root crown up to 50', low live crown ratio, ivy to top of tree * very little living canopy, held up by ivy, tree at high risk of failure in wind, structural defect | | | 1 | 12 | 12 | 12 | 12 | 0 | | | NS |
| 100 | 328 | Bigleaf maple | 24 | 24 | 14 | | | Fair | Ivy @ root crown up to 50', asymmetric canopy to east, ivy to top of tree * tree being pulled down by large amount of ivy, poor rooting, imminent risk of failure structural defect | | | 1 | 14 | 14 | 14 | 14 | 0 | | | NS |
| 101 | 329 | Bigleaf maple | 26 | 26 | 18 | | | Poor | Large cavity @ root crown on east, exposed roots, failing on south, ivy @ root crown to top of tree *tree only held upright by ivy, | | | 1 | 18 | 18 | 18 | 18 | 0 | | | NS |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | 8 | 9 | 10 | | | 11 | | | | 12 | | | |
|-----|------------|---------------|----------|---------------|-----------------------|-----------|-------------|--------|---|-----------------|------------------------|-----------|----------------|----|----|----|-----------|------------------|--------------------|----------------------|
| # | Tree Tag # | Species ID | DBH (in) | Adj. DBH (in) | Drip-line radius (ft) | Wind-firm | OK in grove | Health | Defects/Comments | Proposed Action | | | CRZ/TPZ/LOD | | | | DBH Value | Viable DBH Value | Retained DBH Value | Significant/Landmark |
| | | | | | | | | | | Viable | | | Radius in feet | | | | | | | |
| | | | | | | | | | | Retain | Remove for Improvement | Hazardous | N | W | E | S | | | | |
| | | | | | | | | | tree at high risk of failure structural defect | | | | | | | | | | | |
| 102 | 330 | Bigleaf maple | 13 | 13 | 0 | | | Poor | Failing on north, ivy @ root crown to top of tree 65' *tree actively falling, at high risk of failure structural defect | | | 1 | 0 | 0 | 0 | 0 | 0 | | NS | |
| 103 | 331 | Bigleaf maple | 13 | 13 | 12 | | | Fair | Ivy @ root crown up to top of tree 60' * tree held up by ivy only puts it at high risk of failure structural defect | | | 1 | 12 | 12 | 12 | 12 | 0 | | NS | |
| 104 | 333 | Bigleaf maple | 14 | 14 | 14 | | | Fair | Cavity @ root crown up to 3' on west, suppressed canopy, typical of species, ivy @ root crown up to 25', OK in grove | | 1 | | 14 | 14 | 14 | 14 | 14 | 14 | S | |
| 105 | 334 | Bigleaf maple | 12 | 12 | 15 | | | Fair | Ivy @ root crown up to 35', dead wood, dead scaffold | | 1 | | 15 | 15 | 15 | 15 | 12 | 12 | S | |
| 106 | 335 | Alder | 13 | 13 | 14 | | | Fair | Exposed roots, ivy @ root crown up to 35', low live crown ratio - 10%, dead wood, broken branches * short lived tree with only 10% living tissue, structural defect | | | 1 | 14 | 14 | 14 | 14 | 0 | | NS | |
| 107 | 336 | Bigleaf maple | 12 | 12 | 12 | | | Fair | Cavity @ 4' on west, ivy @ root crown up to top of tree, low live crown ratio - 10% * short lived tree with only 10% living tissue structural defect | | | 1 | 12 | 12 | 12 | 12 | 0 | | NS | |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | 8 | 9 | 10 | | | 11 | | | | 12 | | | | |
|-----|------------|---------------|----------|---------------|-----------------------|-----------|-------------|--------|---|-----------------|------------------------|-----------|----------------|----|----|----|-----------|------------------|--------------------|----------------------|----|
| # | Tree Tag # | Species ID | DBH (in) | Adj. DBH (in) | Drip-line radius (ft) | Wind-firm | OK in grove | Health | Defects/Comments | Proposed Action | | | CRZ/TPZ/LOD | | | | DBH Value | Viable DBH Value | Retained DBH Value | Significant/Landmark | |
| | | | | | | | | | | | | | Radius in feet | | | | | | | | |
| | | | | | | | | | | Viable | | | N | W | E | S | | | | | |
| | | | | | | | | | | Retain | Remove for improvement | Hazardous | | | | | | | | | |
| 108 | 337 | Bigleaf maple | 13 | 13 | 14 west only | | | Fair | Lean to east canopy, asymmetric canopy to west only, self-corrected lean, dead wood, broken branches * leaning tree with limbs only on one side - given to failure especially during wet snow. Soil failure imminent structural defect | | | 1 | 0 | 14 | 0 | 0 | 0 | | | | NS |
| 109 | 338 | Bigleaf maple | 24 | 24 | 18 | | | OK | Ivy @ root crown up to 15', cavity @ 18 on east, typical of species, moss and lichen | 1 | | | 18 | 18 | 18 | 18 | 24 | 24 | 24 | S | |
| 110 | 339 | Bigleaf maple | 15 | 15 | 16 north only | | | Poor | Mostly dead, co-dominant leaders with included bark x2 reduced to 1 @ 10'* nearly dead, already lost 1/2 of tree at 10' structural defect | | | 1 | 16 | 0 | 0 | 0 | 0 | | | NS | |
| 111 | 340 | Bigleaf maple | 23 | 23 | 18 | | | Fair | Ivy @ root crown up to 40', moss and lichen, dead wood, cavity @ root crown up to 15' on west, dead scaffold, previous top loss | 1 | | | 18 | 18 | 18 | 18 | 23 | 23 | 23 | S | |
| 112 | 341 | Bigleaf maple | 25 | 25 | 17 | | | Poor | Decay @ root crown on west, ivy @ root crown to top of tree 70', dead wood, dead scaffold * Tree supported by ivy only, top down die back structural defect | | | 1 | 17 | 17 | 17 | 17 | 0 | | | NS | |
| 113 | 342 | Bigleaf maple | 24 | 24 | 14 | | | Fair | Ivy @ root crown to top of tree, asymmetric canopy to north | 1 | | | 14 | 14 | 14 | 14 | 24 | 24 | 24 | S | |
| 114 | 343 | Bigleaf maple | 9, 6 | 15 | 15 | | | Fair | Co-dominant leaders with included bark x2 @ 3', ivy @ root crown to top of tree, broken branches, dead wood | 1 | | | 15 | 15 | 15 | 15 | 15 | 15 | 15 | S | |
| 115 | 345 | Bigleaf maple | 46 | 46 | 0 | | | Poor | Dead * obviously structural defect | | | 1 | 0 | 0 | 0 | 0 | 0 | | | NS | |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | 8 | 9 | 10 | | | 11 | | | | 12 | | | |
|--------|------------------------|---------------|------------------------|---------------|-----------------------|-----------|-------------|--------|--|-----------------|---|---|----------------|----|----|----|-----------|------------------|--------------------|----------------------|
| # | Tree Tag # | Species ID | DBH (in) | Adj. DBH (in) | Drip-line radius (ft) | Wind-firm | OK in grove | Health | Defects/Comments | Proposed Action | | | CRZ/TPZ/LOD | | | | DBH Value | Viable DBH Value | Retained DBH Value | Significant/Landmark |
| | | | | | | | | | | | | | Radius in feet | | | | | | | |
| | | | | | | | | | | Viable | | | N | W | E | S | | | | |
| Retain | Remove for improvement | Hazardous | | | | | | | | | | | | | | | | | | |
| 116 | 346 | Bigleaf maple | 86 | 86 | 40 | | | Fair | Previous large scaffold failure, dead wood, dead twigs * 1/2 of tree dead and failed, tree in structural defect | | | 1 | 40 | 40 | 40 | 40 | 0 | | | NS |
| 117 | 351 | Bigleaf maple | 42 | 42 | 18 | | | Fair | Large cavity @ root crown up to 4' on west, column of decay @ 4', dead wood, broken branches, ivy @ root crown up to 25', previous failure | 1 | | | 18 | 18 | 18 | 18 | 42 | 42 | 42 | L |
| 118 | 352 | Bigleaf maple | 15 | 15 | 0 | | | Poor | Dead * obviously structural defect | | | 1 | 0 | 0 | 0 | 0 | 0 | | | NS |
| 119 | 353 | Bigleaf maple | 21 | 21 | 16 | | | Fair | Large cavity @ root crown to 12' on east, hypoxylon canker | 1 | | | 16 | 16 | 16 | 16 | 21 | 21 | 21 | S |
| 120 | 354 | Bigleaf maple | 14 | 14 | 17 | | | Fair | Ivy @ root crown to top of tree, previous top loss | 1 | | | 17 | 17 | 17 | 17 | 14 | 14 | 14 | S |
| 121 | 354 | Bigleaf maple | 14 | 14 | 17 | | | Fair | Ivy @ root crown to top of tree, previous top loss | | 1 | | 17 | 17 | 17 | 17 | 14 | 14 | | S |
| 122 | 356 | Bigleaf maple | 20 | 20 | 14 | | | Poor | Co-dominant leaders with included bark x2 reduced to 1 @ 6', mostly dead * Mostly dead tree, structural defect | | | 1 | 14 | 14 | 14 | 14 | 0 | | | NS |
| 123 | 366 | Bigleaf maple | 12 | 12 | 12 south only | | | Poor | Co-dominant leaders with included bark x4 @ root crown reduced to 1, mostly dead * mostly dead tree structural defect | | | 1 | 0 | 0 | 0 | 12 | 0 | | | NS |
| 124 | 367 | Bigleaf maple | 10, 10, 12, 14, 14, 14 | 74 | 15 | | | Poor | Co-dominant leaders with included bark x6 @ root crown, mostly dead * mostly dead tree - structural defect | | | 1 | 15 | 15 | 15 | 15 | 0 | | | NS |
| 125 | 368 | Bigleaf maple | 8, 8, 12, 12 | 40 | 16 | | Yes | Fair | Co-dominant leaders with included bark x4 @ root crown, topped @ 30', dead scaffolds, dead twigs, dead wood | 1 | | | 16 | 16 | 16 | 16 | 40 | 40 | 40 | S |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | 8 | 9 | 10 | | | 11 | | | | 12 | | | |
|--------|------------------------|-------------------|-----------|---------------|-----------------------|-----------|-------------|--------|---|-----------------|--|---|----------------|----|----|----|-----------|------------------|--------------------|----------------------|
| # | Tree Tag # | Species ID | DBH (in) | Adj. DBH (in) | Drip-line radius (ft) | Wind-firm | OK in grove | Health | Defects/Comments | Proposed Action | | | CRZ/TPZ/LOD | | | | DBH Value | Viable DBH Value | Retained DBH Value | Significant/Landmark |
| | | | | | | | | | | | | | Radius in feet | | | | | | | |
| | | | | | | | | | | Viable | | | N | W | E | S | | | | |
| Retain | Remove for improvement | Hazardous | | | | | | | | | | | | | | | | | | |
| 126 | 369 | Bigleaf maple | 15 | 15 | 17 | | Yes | Fair | Previously topped @ 20', strong laterals, dead wood | 1 | | | 17 | 17 | 17 | 17 | 15 | 15 | 15 | S |
| 127 | 370 | Bigleaf maple | 10 | 10 | 16 east only | | Yes | Fair | Co-dominant leaders with included bark x2 @ 20', previously topped @ 20', asymmetric canopy to east | 1 | | | 0 | 16 | 0 | 0 | 10 | 10 | 10 | S |
| 128 | 371 | Western red cedar | 9 | 9 | 7 | | | OK | Typical of species, recently limbed @ 8' | 1 | | | 7 | 7 | 7 | 7 | 9 | 9 | 9 | S |
| 129 | 372 | Bigleaf maple | 7, 5, 7 | 19 | 6 | | Yes | Fair | Co-dominant leaders with included bark x3 @ 1', decay @ crotch, suppressed canopy, typical of species | 1 | | | 6 | 6 | 6 | 6 | 19 | 19 | 19 | S |
| 130 | 373 | Bigleaf maple | 10, 11 | 21 | 11 | | Yes | Fair | Co-dominant leaders with included bark x2 @ 4', low live crown ratio - 10%, dead wood, dead scaffold, asymmetric canopy to east | 1 | | | 11 | 11 | 11 | 11 | 21 | 21 | 21 | S |
| 131 | 374 | Bigleaf maple | 8, 8, 9 | 25 | 14 east only | | Yes | Fair | Co-dominant leaders with included bark x3 @ 2', low live crown ratio - 10%, asymmetric canopy to east, suppressed canopy | 1 | | | 0 | 14 | 0 | 0 | 25 | 25 | 25 | S |
| 132 | 375 | Western red cedar | 6 | 6 | 6 | | | Good | Typical of species | 1 | | | 6 | 6 | 6 | 6 | 6 | 6 | 6 | S |
| 133 | 376 | Bigleaf maple | 6, 11 | 17 | 12 | | | Poor | Taps hollow, mostly dead, co-dominant leaders with included bark x2 @ 3' * mostly dead from internal decay, | | | 1 | 12 | 12 | 12 | 12 | 0 | | | NS |
| 134 | 377 | Bigleaf maple | 8, 12, 14 | 34 | 16 | | Yes | Fair | Dead scaffold, dead trunk, dead wood, broken branches | 1 | | | 16 | 16 | 16 | 16 | 34 | 34 | 34 | S |
| 135 | 378 | Douglas fir | 14 | 14 | 12 | | | OK | Self-corrected lean to north, dead wood, broken branches, typical of species | 1 | | | 14 | 14 | 14 | 14 | 14 | 14 | 14 | S |
| 136 | 379 | Western red cedar | 12 | 12 | 12 | | | OK | Typical of species | 1 | | | 12 | 12 | 12 | 12 | 12 | 12 | 12 | S |
| 137 | 380 | Douglas fir | 8 | 8 | 10 | | | OK | Typical of species, dead wood, broken branches | 1 | | | 10 | 10 | 10 | 10 | 8 | 8 | 8 | S |

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| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | 8 | 9 | 10 | | | 11 | | | | 12 | | | |
|-----|------------|----------------------|----------|---------------|-----------------------|-----------|-------------|--------|--|-----------------|------------------------|-----------|----------------|----|----|----|-----------|------------------|--------------------|----------------------|
| # | Tree Tag # | Species ID | DBH (in) | Adj. DBH (in) | Drip-line radius (ft) | Wind-firm | OK in grove | Health | Defects/Comments | Proposed Action | | | CRZ/TPZ/LOD | | | | DBH Value | Viable DBH Value | Retained DBH Value | Significant/Landmark |
| | | | | | | | | | | | | | Radius in feet | | | | | | | |
| | | | | | | | | | | Viable | | | N | W | E | S | | | | |
| | | | | | | | | | | Retain | Remove for improvement | Hazardous | | | | | | | | |
| 138 | 381 | Douglas fir | 6 | 6 | 6 | | | Fair | Suppressed canopy, low live crown ratio - 5% | 1 | | | 6 | 6 | 6 | 6 | 6 | 6 | 6 | S |
| 139 | 382 | Douglas fir | 6 | 6 | 6 | | | Fair | Suppressed canopy, low live crown ratio - 5% | 1 | | | 6 | 6 | 6 | 6 | 6 | 6 | 6 | S |
| 140 | 384 | Bigleaf maple | 10 | 10 | 15 | | | OK | Typical of species | 1 | | | 15 | 15 | 15 | 15 | 10 | 10 | 10 | S |
| 141 | 394 | Bigleaf maple | 10 | 10 | 10 | | Yes | Fair | Co-dominant leaders with included bark x2 @ 6', low live crown ratio - 10%, OK in grove | 1 | | | 10 | 10 | 10 | 10 | 10 | 10 | 10 | S |
| 142 | 396 | Bigleaf maple | 39 | 39 | 16 | | | OK | Co-dominant leaders with included bark x4 @ 5', dead wood, dead scaffold, OK with pruning | 1 | | | 16 | 16 | 16 | 16 | 39 | 39 | 39 | L |
| 143 | 567 | Douglas fir | 34 | 34 | 17 | | | OK | Co-dominant leaders with included bark X2 @ 15', spur @ 15', dead wood, dead twigs, column of decay, 12-18 sap, horizontal crack in bark, wire imbedded at 11', slight coning, free flowing sap @ 15' | 1 | | | 17 | 17 | 17 | 17 | 34 | 34 | 34 | L |
| 144 | 568 | Yellow willow | 13 | 13 | 15 | | | Poor | Cavity root crown to 4' * 4' hole in tree; tree in permanent decline and at high risk of failure * defects in tree were recorded as being at the highest level of risk when assessed in 2016 - structural defect | | | 1 | 15 | 15 | 15 | 15 | 0 | | | NS |
| 145 | 569 | Colorado blue spruce | 15 | 15 | 10 | | | Poor | Dead * obviously structural defect | | | 1 | 10 | 10 | 10 | 10 | 0 | | | NS |
| 146 | 570 | Horse chestnut | 22 | 22 | 17 | | | OK | Typical of species, Carpenter ants, woodpecker activity, swing set chains embedded in limb. | | 1 | | 17 | 17 | 17 | 17 | 22 | 22 | | S |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | 8 | 9 | 10 | | | 11 | | | | 12 | | | |
|-----|------------|---------------|----------|---------------|-----------------------|-----------|-------------|--------|--|-----------------|------------------------|-----------|----------------|----|----|----|-----------|------------------|--------------------|----------------------|
| # | Tree Tag # | Species ID | DBH (in) | Adj. DBH (in) | Drip-line radius (ft) | Wind-firm | OK in grove | Health | Defects/Comments | Proposed Action | | | CRZ/TPZ/LOD | | | | DBH Value | Viable DBH Value | Retained DBH Value | Significant/Landmark |
| | | | | | | | | | | | | | Radius in feet | | | | | | | |
| | | | | | | | | | | Viable | | | N | W | E | S | | | | |
| | | | | | | | | | | Retain | Remove for improvement | Hazardous | | | | | | | | |
| 147 | 571 | Catalpa | 8 | 8 | 14 | | | Fair | Abnormal bark, shedding bark, carpenter ants, dead wood, broken branch's | | 1 | | 14 | 14 | 14 | 14 | 8 | 8 | | S |
| 148 | 572 | Catalpa | 24 | 24 | 18 | | | OK | Typical of species, cavity 1' to 10' south | 1 | | | 18 | 18 | 18 | 18 | 24 | 24 | 24 | S |
| 149 | 573 | Plum | 7,6 | 13 | 8 | | | OK | Co-dominant leaders with included bark X 2 @ root crown, typical of species, anthracnose | 1 | | | 8 | 8 | 8 | 8 | 13 | 13 | 13 | S |
| 150 | 898 | Bigleaf maple | 20 | 20 | 17 | | | Fair | Tree is half dead, top is dead, dead scaffold. Moss and lichen * 1/2 of the tree is already dead, tree is in structural defect | | | 1 | 9 | 9 | 9 | 9 | 0 | | | NS |
| 151 | 899 | Bigleaf maple | 24 | 24 | 14 | | | Poor | Dead top, dead scaffolds, moss and lichen * tree dying from top down likely a root issue, disease | | | 1 | 14 | 14 | 14 | 14 | 0 | | | NS |
| | | | | | | | | | | 30 | 64 | 57 | | | | | 1983 | 1983 | 596 | |

Offsite potentially impacted trees:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | 8 | 9 | 10 | | | 11 | | | |
|---|------------|-------------------|------------|---------------|-----------------------|-----------|-------------|--------|---|-----------------|------------|--------|----------------|----|----|----|
| # | Tree Tag # | Species ID | DBH (in) | Adj. DBH (in) | Drip-line radius (ft) | Wind-firm | OK in grove | Health | Defects/Comments | Proposed Action | | | CRZ/TPZ/LOD | | | |
| | | | | | | | | | | Viable | Non-viable | Remove | Radius in feet | | | |
| | | | | | | | | | | | | | N | W | E | S |
| 1 | A | Western red cedar | 44 | 44 | 16 | | | OK | Typical of species, 3' from fence line, previous top loss | 1 | | | 16 | 16 | 16 | 16 |
| 2 | B | Western red cedar | 37 | 37 | 14 | | | OK | 8' from fence line, typical of species | 1 | | | 14 | 14 | 14 | 14 |
| 3 | C | Bigleaf maple | 32 | 32 | 15 | | | Poor | Mostly dead | | 1 | | 15 | 15 | 15 | 15 |
| 4 | D | Western red cedar | 45 | 45 | 10 | | | Fair | Nurse tree, large cavity in center of tree @ root crown, woodpecker activity, carpenter ants | | 1 | | 10 | 10 | 10 | 10 |
| 5 | E | Bigleaf maple | 18, 14 | 23 | 22 west only | | | Fair | Co-dominant leaders with included bark x2 @ root crown, exposed roots, moss and lichen, girdling root, asymmetric canopy to west, lean to south | | 1 | | 22 | 22 | 22 | 22 |
| 6 | F | Western red cedar | 27, 16, 18 | 36 | 14 | | | OK | Co-dominant leaders with included bark x3 @ root crown, typical of species | 1 | | | 14 | 14 | 14 | 14 |
| 7 | G | Bigleaf maple | 32 | 32 | 20 | | | OK | Typical of species, cavity @ 15' to 18' on north | 1 | | | 20 | 20 | 20 | 20 |
| 8 | H | Bigleaf maple | 50 | 50 | 30 | | | Fair | Co-dominant leaders with included bark x2 @ 4', large cavity on north @ root crown to 16', dead scaffold, OK in grove | | 1 | | 30 | 30 | 30 | 30 |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | 8 | 9 | 10 | | | 11 | | | |
|----|------------|-------------------|-----------|---------------|-----------------------|-----------|-------------|--------|--|-----------------|------------|--------|-------------------------------|----|----|----|
| # | Tree Tag # | Species ID | DBH (in) | Adj. DBH (in) | Drip-line radius (ft) | Wind-firm | OK in grove | Health | Defects/Comments | Proposed Action | | | CRZ/TPZ/LOD Radius in feet | | | |
| | | | | | | | | | | Viable | Non-viable | Remove | N | W | E | S |
| 9 | I | Western red cedar | 18 | 18 | 9 | | | Good | Typical of species | 1 | | | 9 | 9 | 9 | 9 |
| 10 | J | Douglas fir | 24 | 24 | 14 | | | Good | Self-corrected lean, typical of species, dead wood, broken branches | 1 | | | 14 | 14 | 14 | 14 |
| 11 | K | Western red cedar | 10 | 10 | 9 | | | Good | Typical of species | 1 | | | 9 | 9 | 9 | 9 |
| 12 | 225 | Dawn redwood | 25 | 25 | 15 | | Yes | Fair | Dead spur @ root crown, asymmetric canopy to west, typical of species grown in shade | 1 | | | 15 | 15 | 15 | 15 |
| 13 | 226 | Dawn redwood | 21 | 21 | 15 | | Yes | Fair | Typical of species grown in shade, dead wood, broken branches, asymmetric canopy to west | 1 | | | 15 | 15 | 15 | 15 |
| 14 | 227 | Dawn redwood | 11, 8, 18 | 22.5 | 16 | | Yes | Fair | Co-dominant leaders with included bark x3 @ root crown, girdling rope @ 8', dead spur, carpenter ants bark only, column of decay on east | 1 | | | 16 | 16 | 16 | 16 |
| 15 | 228 | Dawn redwood | 26 | 26 | 18 | | | OK | Carpenter ants bark only, previous top loss, typical of species | 1 | | | 18 | 18 | 18 | 18 |
| 16 | 232 | Dawn redwood | 22 | 22 | 13 | | | OK | Typical of species, slight lean-to north | 1 | | | 13 | 13 | 13 | 13 |
| 17 | 233 | Cedar variety | 9 | 9 | 10 | | Yes | Fair | Thin canopy, OK with light | 1 | | | 10 | 10 | 10 | 10 |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | 8 | 9 | 10 | | | 11 | | | |
|----|------------|---------------|-------------|---------------|-----------------------|-----------|-------------|--------|---|-----------------|------------|--------|-------------------------------|----|----|----|
| # | Tree Tag # | Species ID | DBH (in) | Adj. DBH (in) | Drip-line radius (ft) | Wind-firm | OK in grove | Health | Defects/Comments | Proposed Action | | | CRZ/TPZ/LOD Radius in feet | | | |
| | | | | | | | | | | Viable | Non-viable | Remove | N | W | E | S |
| 18 | 287 | Alder | 8 | 8 | 10 | | | Fair | Previous top loss, lean on north, asymmetric canopy to north, moss and lichen | | 1 | | 10 | 10 | 10 | 10 |
| 19 | 296 | Alder | 13, 4 | 13.5 | 11 | | | OK | Co-dominant leaders with included bark x2 @ root crown, typical of species, dead wood | 1 | | | 11 | 11 | 11 | 11 |
| 20 | 308 | Bigleaf maple | 29 | 29 | 16 | | | OK | Ivy @ root crown up to 20', typical of species | 1 | | | 16 | 16 | 16 | 16 |
| 21 | 332 | Bigleaf maple | 23 | 23 | 16 | | | Fair | Ivy @ root crown to top of tree, cavity on south @ root crown to 4', lean to west | | 1 | | 16 | 16 | 16 | 16 |
| 22 | 285 | Alder | 16 | 16 | 16 | | | OK | Typical of species, dead wood, broken branches | 1 | | | 16 | 16 | 16 | 16 |
| 23 | 286 | Alder | 8 | 8 | 12 | | | OK | Typical of species, dead wood, broken branches | 1 | | | 12 | 12 | 12 | 12 |
| 24 | 380 | Douglas fir | 8 | 8 | 10 | | | OK | Typical of species, dead wood, broken branches | 1 | | | 10 | 10 | 10 | 10 |
| 25 | 383 | Bigleaf maple | 10, 8, 8, 8 | 17 | 15 | | | OK | Co-dominant leaders with included bark x4 @ root crown, cavity on north, typical of species | 1 | | | 15 | 15 | 15 | 15 |
| 26 | 384 | Bigleaf maple | 10 | 10 | 15 | | | OK | Typical of species | 1 | | | 15 | 15 | 15 | 15 |
| 27 | 385 | Bigleaf maple | 5, 8, 10, 6 | 15 | 15 | | | OK | Co-dominant leaders with included bark x4 @ root crown, 1 trunk dead, girdled by barb wire, typical of species, OK in grove | 1 | | | 15 | 15 | 15 | 15 |

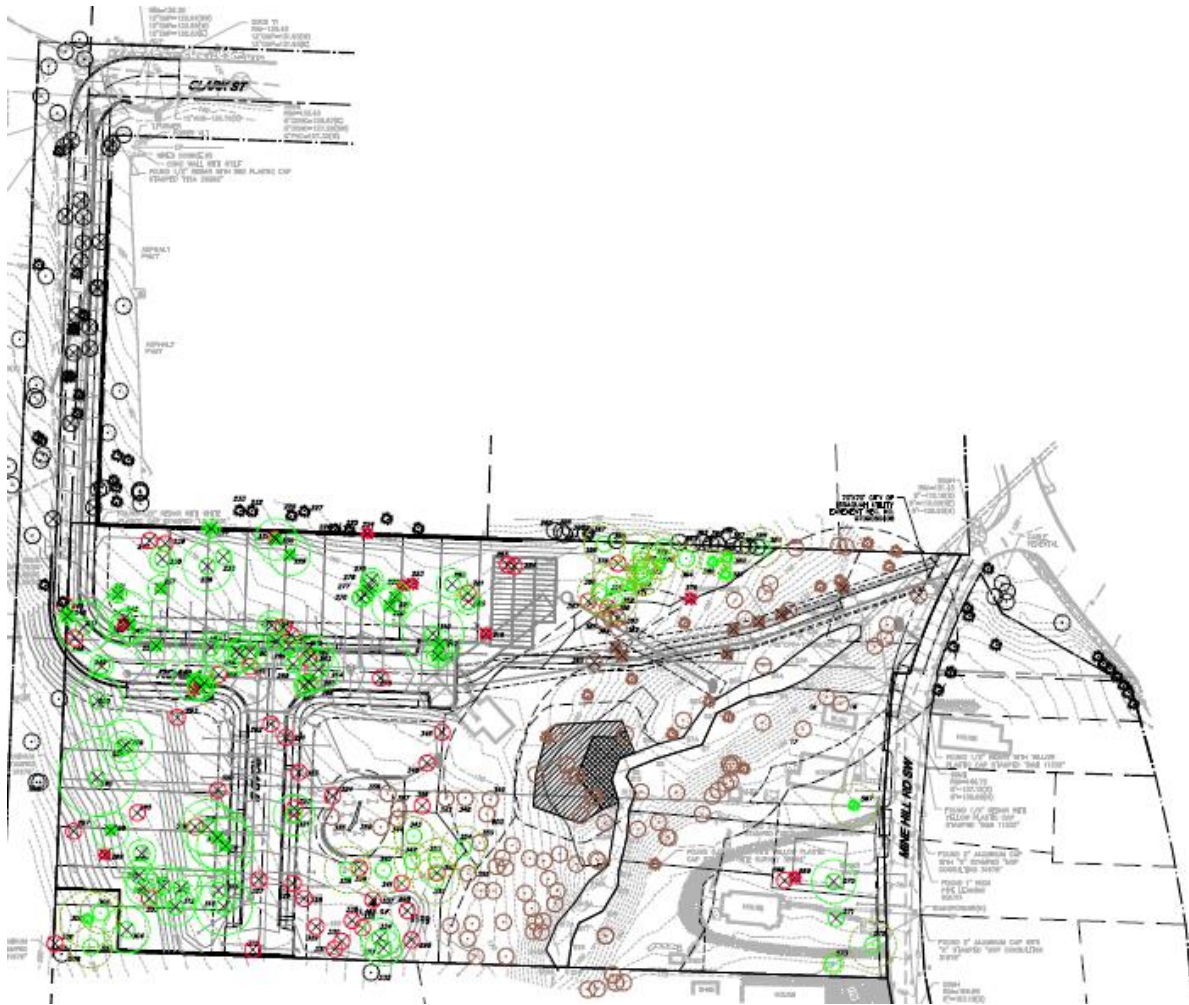
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | 8 | 9 | 10 | | | 11 | | | |
|----|------------|---------------|----------------|---------------|-----------------------|-----------|-------------|--------|--|-----------------|------------|--------|-------------------------------|----|----|----|
| # | Tree Tag # | Species ID | DBH (in) | Adj. DBH (in) | Drip-line radius (ft) | Wind-firm | OK in grove | Health | Defects/Comments | Proposed Action | | | CRZ/TPZ/LOD Radius in feet | | | |
| | | | | | | | | | | Viable | Non-viable | Remove | N | W | E | S |
| 28 | 386 | Bigleaf maple | 10 | 10 | 15 | | | Fair | Cavity @ 1' to 4', OK in grove | | 1 | | 15 | 15 | 15 | 15 |
| 29 | 387 | Bigleaf maple | 9, 4 | 10 | 15 | | Yes | Fair | Co-dominant leaders with included bark x2 @ root crown, girdled by barb wire, mostly dead, OK in grove | 1 | | | 15 | 15 | 15 | 15 |
| 30 | 388 | Bigleaf maple | 10, 6 | 11.5 | 15 | | | OK | Co-dominant leaders with included bark x2 @ root crown, typical of species | 1 | | | 15 | 15 | 15 | 15 |
| 31 | 389 | Bigleaf maple | 12, 9, 9, 9, 9 | 22.5 | 15 | | | OK | Co-dominant leaders with included bark x5 @ root crown, girdled root, girdled with barb wire, typical of species | 1 | | | 15 | 15 | 15 | 15 |
| 32 | 390 | Bigleaf maple | 8 | 8 | 15 | | | Poor | Mostly dead, co-dominant leaders with included bark x2 reduced to 1, girdled barb wire | | 1 | | 15 | 15 | 15 | 15 |
| 33 | 391 | Bigleaf maple | 10, 9, 8, 6, 6 | 18 | 15 | | | Poor | Girdled with barb wire, co-dominant leaders with included bark x5 @ root crown, mostly dead | | 1 | | 15 | 15 | 15 | 15 |
| 34 | 392 | Bigleaf maple | 6, 9 | 11 | 15 | | | Fair | Girdled with barb wire, co-dominant leaders with included bark x2 @ 3', OK in grove | | 1 | | 15 | 15 | 15 | 15 |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | 8 | 9 | 10 | | | 11 | | | |
|----|------------|---------------|--------------|---------------|-----------------------|-----------|-------------|--------|--|-----------------|------------|--------|----------------|----|----|----|
| # | Tree Tag # | Species ID | DBH (in) | Adj. DBH (in) | Drip-line radius (ft) | Wind-firm | OK in grove | Health | Defects/Comments | Proposed Action | | | CRZ/TPZ/LOD | | | |
| | | | | | | | | | | Viable | Non-viable | Remove | Radius in feet | | | |
| | | | | | | | | | | | | | N | W | E | S |
| 35 | 393 | Bigleaf maple | 4, 10, 9, 10 | 17 | 17 | | Yes | Fair | Co-dominant leaders with included bark x6 @ root crown, dead scaffold, dead trunks, could be pruned, OK in grove | 1 | | | 17 | 17 | 17 | 17 |
| 36 | 395 | Bigleaf maple | 18, 15 | 23.5 | 15 | | | OK | Co-dominant leaders with included bark x2 @ root crown, girdled wire, typical of species, asymmetric canopy to north, dead wood, broken branches | 1 | | | 15 | 15 | 15 | 15 |
| 37 | 397 | Douglas fir | 12 | 12 | 12 | | | OK | Previous top loss, elongated branches, dead twigs, moss and lichen | 1 | | | 12 | 12 | 12 | 12 |
| 38 | 398 | Bigleaf maple | 59 | 59 | 16 north only | | | OK | Co-dominant leaders with included bark x5 @ 4', 2 dead trunks, dead wood, dead scaffold, hanger, asymmetric canopy to north, OK if pruned | 1 | | | 16 | 0 | 0 | 0 |
| | | | | | | | | | | 28 | 10 | 0 | | | | |

Site:



Proposed site improvements:



Discussion about the Hazard Trees onsite:

Since the original study of the trees was completed four years ago, the ISA has moved from numerical system of determine the risk of tree failure (1 being a tree at low risk of failure, 13 being a tree in the process of failure). This original method of quantifying risk was based on totally the number of defects a tree had and assigning a number to indicate the level of risk the tree posed if it were to fail. This system included a numbering system from 1-4 that addressed the target the failing tree might hit.

More recently the ISA has adopted a new criteria that continues to take into account the defects of the tree, but also includes the soil conditions, and previous impacts (e.g. paving over the roots) as well as the "value" of the target if the tree were to fail (a low target environment would be a tree that fails in the woods that causes no damage to the environment, a high target area would be a day care center or hospital with people being present most of the time).

It is sometimes difficult to move between the older and newer criteria in tree risk assessment. However, in this case each tree was assessed using a Level 2 tree risk assessment, making the transition between the two methods easy, as the final assessment is generally done offsite, when I can determine the quantity of defects (see column entitled "Defects/Comments").

Currently the trees at high risk of failure have no target so in ISA terminology cannot be considered "hazardous" only at high risk of failure.

Once the trees are shown overlaid the proposed site plan, it is easy to see that nearly all the trees have housing as a target except for trees 366 and 367. They may be retained however, because of the poor condition they are in no tree credits should be given them.

It is important, I think, when performing a study such as this, to bear in mind that forests begin when "pioneer" species trees see into sunny wet areas. As the name implies, these trees are first to become established in an area. Their seedlings require full sun to germinate. The trees grown quickly and devote very little of the resources to compartmentalizing decay (to stop it from killing the tree). Because they have little defense to insects and injury, they are short-lived trees. The pioneer species include: Cottonwood, red alder, black locust (Robinia), Ash and to some extent Bigleaf maple etc. Their purpose in the ecosystem to grow quickly, provide shade necessary for "climax" species trees to germinate. By the time the climax species trees begin the shade the sun-loving pioneers, they are dying and providing nutrients to the soil to aid the longer-lived trees. These slow growing trees expend a lot of their resources fighting infection and decay.

I have included the % of trees currently deemed as "high risk" trees:

| % Hazard trees by species | | |
|---------------------------|--------------|-----|
| Species | No. of trees | % |
| Bigleaf maple | 30 | 71% |
| Alder | 5 | 12% |
| Ash | 1 | 2% |
| Bitter cherry | 1 | 2% |
| Colorado blue spruce | 1 | 2% |
| Incense cedar | 1 | 2% |
| Norway spruce | 1 | 2% |
| Western red cedar | 1 | 2% |

| % Hazard trees by species | | |
|---------------------------|----|-----|
| Yellow willow | 1 | 2% |
| | 42 | 97% |

As might be expected, 89% of the trees assessed as being at high risk of failure are pioneer species trees. In the next few decades, the evergreen climax species trees will overtake the site. Were that to occur, the total number of trees in poor condition would be expected to drastically decline.

In mitigating a site such as this one, where there is a desire for increased canopy cover, the goal can be met by planting native species that would normally be present in higher quantities in the next few decades.

Discussion and Conclusion:

| Tree Density Calculation | |
|--|----------|
| | 10.02.20 |
| Total number of trees counted outside critical areas | 149 |
| Total number of hazard trees | 55 |
| Total number of significant trees | 94 |
| Total number of retained trees proposed | 30 |
| Total number of tree credits | 1978 |
| Required tree density (1983*.30) | 594 |
| Total number of retained tree credits proposed | 596 |
| Required mitigation | 0 |

The 4.9-acre Mine Hill site is located south of Sunset Way and west of Front Street. The parcel is divided by a small creek running north and south at the bottom of a steep slope. On the east side of the creek are several existing homes, on the west side is a single existing home. Proposed site improvements include a dividing the site into 15 individual lots with townhomes and single-family residence.

The site has a total of 149 trees on it, (excluding trees in critical area). Ninety-four (94) trees are significant and thirty (30) are proposed to be retained. There are 1978 DBH total inches on the site (excluding hazardous trees and those trees in critical areas). The city requires that the applicant retain 30% of those tree inches (1978 * 30%) which equals 594 DBH inches. The site proposal retains 596 tree credits. No mitigation is necessary.

Mitigation: 0 trees

Discussion and Conclusion:

This site is heavily encumbered by critical slope and wetland. The site is divided by a deep ravine with a small creek at the bottom. There are currently several abandoned homes and outbuildings on the lot. The property was logged many years ago and currently is mostly populated primarily with pioneer species trees – deciduous trees that grow quickly, are short-lived and presumed adapted to an environment where they die and decompose to provide shade and nutrients for more slow growing conifers.

On this site, the trees have been compromised further (beyond their biological susceptibility to decay) by the wet soil surrounding the creek, as well as, the fact that many are heavily covered with invasive species plant material (English ivy and Himalayan blackberry). Many of the long-neglected trees remain standing only because they are supported by ropes of English ivy.

The proposed site plan is driven by the grading necessary to build the access road, several clusters of the viable trees need to be removed for the installation of utilizes and roadway access. Reducing the number of lots does little to add to the total number of trees retained.

Mark-up summary from RFI:

1. Comment: Please identify the number of hazardous trees present on the site. This number should be shown, but not included in retention or removal calculations. **Completed:** Onsite tree spreadsheet has been updated to show the hazardous trees without contributing any tree credits.
2. Per IMC, if the site is below the minimum tree density number, trees must be added to the site. Please clarify and or revise. **Completed:** The original submittal only considered viable trees (with the expectation that they remain healthy for at least a decade. It did not include trees rated in fair condition toward the total number of site trees. This report has been updated to include those trees that were not actually dead, or mostly dead into the total tree number; by raising the total number of tree credits for the site, this in turn raised the % of trees that need to be retained – as that number fell below the minimum, mitigation trees are required.
3. Please add the likelihood of impact, consequences of failure, and overall tree risk rating assessments to hazardous trees as listed in the most recent adopted IDA standard tree risk assessment evaluation. **Completed:** Please see the updated section entitled "Hazard Trees"
4. The DBH for all viable trees, except for trees that are poor (aka hazardous), must be provided and included in the tree calculations. **Completed:** Please see comments on question 1 and 2.
5. Health condition for this tree (319) has not been identified. Please revise. **Completed:** Spreadsheet has been updated.
6. The construction of the retaining wall will most likely impact existing trees on the adjacent property. Please provide a letter or document from the property owner providing consent with the removal of these trees. Also, what measures are recommended to keep these trees from being impacted. **Completed:** Retaining wall was removed.

Glossary:

ANSI A300: American National Standards Institute (ANSI) standards for tree care

Chlorotic: discoloration caused by lack of chlorophyll in the foliage

Conifer: A tree that bears cones and has evergreen needles or scales

Crown: the above ground portion of the tree comprised of branches and their foliage

Crown raise pruning: a pruning technique where the lower branches are removed, thus raising the overall height of the crown from the ground

DBH or DSH: diameter at breast or standard height; the diameter of the trunk measured 54 inches (4.5 feet) above grade

Deciduous: tree or other plant that loses its leaves annually and remains leafless generally during the cold season

Epicormic: arising from latent or adventitious buds

Evergreen: tree or plant that keeps its needles or leaves year-round; this means for more than one growing season

Increment: the amount of new wood fiber added to a tree in each period, normally one year.

ISA: International Society of Arboriculture

Landscape function: the environmental, aesthetic, or architectural functions that a plant can have

Lateral: secondary or subordinate branch

Limits of disturbance: The boundary of minimum protection around a tree, the area that cannot be encroached upon without possible permanent damage to the tree. It is a distance determined by a qualified professional and is based on the age of the tree, its health, the tree species tolerance to disruption and the type of disturbance. It also considers soil and environmental condition and previous impacts. It is unique to each tree in its location.

Limited visual assessment: a visual assessment from a specified perspective such as foot, vehicle, or aerial (airborne) patrol of an individual tree or a population of trees near specified targets to identify specified conditions or obvious defects (ISA 2013)

Live crown ratio: the percentage of living tissue in the canopy versus the tree's height. It is a good indicator of overall tree health and the trees growing conditions. Trees with less than a 30% Crown ratio often lack the necessary quantity of photosynthetic material necessary to sustain the roots; consequently, the tree may exhibit low vigor and poor health.

Monitoring: keeping a close watch; performing regular checks or inspections

Owner/manager: the person or entity responsible for tree management or the controlling authority that regulates tree management

Pathogen: causal agent of disease

Phototropic growth: growth toward light source or stimulant

ROW: Right-of-way; generally referring to a tree that is located offsite on a city easement

Reaction wood: Specialized secondary xylem which develops in response to a lean or similar mechanical stress, it serves to help restore the stem to a vertical position

Self-corrected lean: a tree whose trunk is at an angle to the grade but whose trunk and canopy changes to become upright/vertical

Significant tree: a tree measuring a specific diameter determined by the municipality the tree grows in. Some municipalities deem that only healthy trees can be significant, other municipalities consider both healthy and unhealthy trees of a determined diameter to be significant

Snag: a tree left partially standing for the primary purpose of providing habitat for wildlife

Soil structure: the size of particles and their arrangement; considers the soil, water, and air space

Sounding: process of striking a tree with a mallet or other appropriate tool and listening for tones that indicate dead bark, a thin layer of wood outside a cavity, or cracks in wood

Structural defects: flaws, decay, or other faults in the trunk, branches, or root collar of a tree, which may lead to failure; may be genetic, or environmental

Tree credit: A number assigned to a tree by a municipality that may be equal to the diameter of the tree or a numerical count of the tree, or related to diameter by a factor conveyed in a table of the municipal code

Trunk area: the cross-sectional area of the trunk based upon measurement at 54 inches (4.5 ft.) above grade

Visual Tree Assessment (VTA): method of evaluating structural defects and stability in trees by noting the pattern of growth. Developed by Claus Mattheck (Harris, et al 1999) detailed visual inspection of a tree and surrounding site that may include the use of simple tools. It requires that a tree risk assessor walk completely around the tree trunk looking at the site, aboveground roots, trunk, and branches (ISA 2013)

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Assumptions and Limiting Conditions

1. Any legal description provided to the consultant/appraiser is assumed to be correct. Any titles and ownerships to any property are assumed to be good and marketable. No responsibility is assumed for matters legal in character. Any and all property is appraised or evaluated as thou free and clear, under responsible ownership and competent management.
2. It is assumed that any property is not in violation of any applicable codes, ordinances, statutes or other governmental regulations.
3. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consultant/appraiser can neither guarantee nor be responsible for the accuracy of information provided by others.
4. The consultant/appraiser shall not be required to give testimony or to attend court by reason of the report unless subsequent contractual arrangements are made including payment of an additional fee for such services as described in the fee schedule and contract of engagement.
5. Loss or alteration of any part of this report invalidates the entire report.
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